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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,165	02/24/2004	Chikashi Kamei	016907-1602	2366

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EXAMINER	
WALSH, RYAN D	

ART UNIT	PAPER NUMBER
2852	

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/784,165	KAMEI, CHIKASHI
	Examiner	Art Unit
	Ryan D. Walsh	2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 February 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2/24/04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

Page 9, Lines 17-21, the numbers (16) and (17) are described as "thermistors." Earlier on Page 8-9, Line 27, numbers (16) and (17) are described as thermostats. Page 25, Line 5, "heat roller (1)" is earlier described as heat roller (10), Page 8, Line 12. The underlined text renders the specification unclear. Appropriate correction is required.

Drawings

The drawings are objected to because of lack of information in Fig. 8. This figure fails to describe the characteristics of the heat roller (axis are not labeled). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 1 is objected to because of the following informalities:

Page 30, line 7 – "...the same operating temperature as the first thermostat." The underlined text lacks proper antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim 7 is objected to because of the following informalities:

Page 33, line 17 – "...the same operating temperature as the first thermostat." The underlined text lacks proper antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinouchi et al (US Pat. # 6,889,018) in view of Akutsu et al (US Pat. # 6,775,491).

Regarding claims 1 and 2, Kinouchi et al discloses a "fixing device (Fig. 1, ref.#1) comprising, a substantially cylindrical heat roller (Fig. 2, ref.#2) which is used to fix toner on a paper sheet (Description, col. 1, lines 13-17); a center heater (Fig. 2, ref.# 11a) which is placed, inside the heat roller, in a position shifted in a first direction from a

central position a diameter direction of the heat roller, in a center region in a longitudinal direction of the heat roller; side heaters (Fig. 2, ref.#11b) which are placed, inside the heat roller, in positions shifted in a second direction from the central position in the diameter direction of the heat roller, in side regions the longitudinal direction of the heat roller." Kinouchi et al does not teach "a first power shutoff unit which is installed a position corresponding to the center heater in the longitudinal direction of the heat roller, on a heat roller surface where distances to the center heater and side heater are equal in the diameter direction of the heat roller, and which shuts off power supply to the center heater and side heaters when a surface temperature of the heat roller in the installation position has reached a predetermined operating temperature; and a second power shutoff unit which is installed in a position corresponding to one the longitudinal direction of the side heaters in the heat roller, on a heat roller surface where distances to the center heater and side heater are equal in the diameter direction of the heat roller, and which shuts off power supply to the center heater and side heaters when a surface temperature of the heat roller in the installation position has reached the same operating temperature as the first thermostat."

However, "the first power shutoff unit and second power shutoff unit..." is routine in the art as evident to the teaching of Akutsu et al. (see Abstract, lines 5-13 and Figure 1, ref.#'s 13 and 14). It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Kinouchi et al's invention by having a "first power shutoff unit and a second power shutoff unit, installed on the surface of a heat roller."

The ordinary artisan would have been motivated to modify Kinouchi et al's invention in a matter described above for at least the purpose of preventing an abnormal increase in temperature.

Regarding claim 2, Kinouchi et al also does not teach "a fixing device according to claim 1, wherein the first power shutoff unit and second power shutoff unit comprise thermostats having the same operating characteristics."

However, " the first power shutoff unit and second power shutoff unit comprising of thermostats having the same operating characteristics" is routine in the art as evident to the teaching of Akutsu et al. (see col. 3, lines 62-64). It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Kinouchi et al's invention by having "he first and second power shutoff units, comprising of thermostats."

The ordinary artisan would have been motivated to modify Kinouchi et al's invention in a matter described above for at least the purpose of preventing an abnormal increase in temperature.

Regarding claim 3, Kinouchi et al discloses "a fixing device according to claim 1, which further comprises a first thermistor (Fig. 2, ref.# 6a) which detects the surface temperature of the heat roller in the center region in the longitudinal direction of the heat roller, a second thermistor (Fig 2, ref.# 6b) which detects the surface temperature of the heat roller in the side region in the longitudinal direction of the heat roller, and a controller (Fig. 3, ref.# 31) which controls power supply to the center heater and side heaters such that the surface temperature, detected by the first thermistor, of the center

region the longitudinal direction of the heat roller and the surface temperature, detected by the second thermistor, of the side region in the longitudinal direction of the heat roller are maintained at a fixing control temperature, and in which the operating temperature of the first power shutoff unit and second a temperature for protecting power shutoff unit a predetermined device." Again, Kinouchi et al does not teach "the first and second power shutoff units..." as described in claim 1, but proper documentation regarding this fact is discussed in the rejection of claim 1 above.

Regarding claim 4, Kinouchi et al does not teach "a fixing device according to claim 3, wherein the first power shutoff unit and second power shutoff unit comprise thermostats having the same operating characteristics."

However, " the first power shutoff unit and second power shutoff unit comprising of thermostats having the same operating characteristics" is routine in the art as evident to the teaching of Akutsu et al. (see col. 3, lines 62-64). It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Kinouchi et al's invention by having "he first and second power shutoff units, comprising of thermostats."

The ordinary artisan would have been motivated to modify Kinouchi et al's invention in a matter described above for at least the purpose of preventing an abnormal increase in temperature.

Regarding claim 5, Kinouchi et al discloses "a fixing device according to claim 3, further comprising: a comparator (Fig. 3, ref.# 35) which compares the temperature detected by the first thermistor or second thermistor with a first protection control

temperature higher than the fixing control temperature and lower than the device protection temperature of the first thermistor and second thermistor; and a reset circuit (Fig. 3, ref.# 151) which turns off a power supply of the fixing device on the basis of a signal output from the comparator and indicating that the temperature detected by the first thermistor or second thermistor is not less than the first protection control temperature, wherein the controller further compares the temperature detected by the first thermistor or second thermistor with a second protection control temperature higher than the control temperature and lower than the device protection temperature of the first thermistor and second thermistor, and controls the reset circuit turn off the power supply of the fixing device if the temperature detected by the first thermistor or second thermistor is not less than the second protection control temperature."

Regarding claim 6, Kinouchi et al does not teach "a fixing device according to claim 5, wherein the first power shutoff unit and second power shutoff unit comprise thermostats having the same operating characteristics."

However, " the first power shutoff unit and second power shutoff unit comprising of thermostats having the same operating characteristics" is routine in the art as evident to the teaching of Akutsu et al. (see col. 3, lines 62-64). It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Kinouchi et al's invention by having "he first and second power shutoff units, comprising of thermostats."

The ordinary artisan would have been motivated to modify Kinouchi et al's invention in a matter described above for at least the purpose of preventing an abnormal increase in temperature.

Regarding claim 7, Kinouchi et al discloses "a toner image formation unit (Fig. 1, ref.#1) which forms a toner image on the paper sheet; substantially cylindrical heat roller (Description, col. 1, lines 13-17) which is used to fix the toner image, formed on the paper sheet by the toner image formation unit, on the paper sheet; a center heater (Fig. 2, ref.# 11a) which is placed, inside the heat roller, in a position shifted in a first direction from a central position in a diameter direction of the heat roller, in a center region in a longitudinal direction of the heat roller; side heaters (Fig. 2, ref.#11b) which are placed, inside the heat roller, in positions shifted a second direction from the central position in the diameter direction of the heat roller, in side regions in the longitudinal direction of the heat roller." Kinouchi et al does not teach "a first power shutoff unit which is installed a position corresponding to the center heater in the longitudinal direction of the heat roller, on a heat roller surface where distances to the center heater and side heater are equal in the diameter direction of the heat roller, and which shuts off power supply to the center heater and side heaters when a surface temperature of the heat roller in the installation position has reached a predetermined operating temperature; and a second power shutoff unit which is installed in a position corresponding to one the longitudinal direction of the side heaters in the heat roller, on a heat roller surface where distances to the center heater and side heater are equal in the diameter direction of the heat roller, and which shuts off power supply to the center heater and side heaters when a

surface temperature of the heat roller in the installation position has reached the same operating temperature as the first thermostat."

However, "the first power shutoff unit and second power shutoff unit..." is routine in the art as evident to the teaching of Akutsu et al. (see Abstract, lines 5-13 and Figure 1, ref.#'s 13 and 14). It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify Kinouchi et al's invention by having a "first power shutoff unit and a second power shutoff unit, installed on the surface of a heat roller."

The ordinary artisan would have been motivated to modify Kinouchi et al's invention in a matter described above for at least the purpose of preventing an abnormal increase in temperature.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan D. Walsh whose telephone number is 571-272-2627. The examiner can normally be reached on M-F 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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